



U.S. Department of Energy

0059748

**Office of River Protection**

P.O. Box 450  
Richland, Washington 99352

JUL 02 2003

03-ED-106

Mr. A. W. Conklin, Head  
Air Emissions and Defense  
Waste Section  
State of Washington  
Department of Health  
P.O. Box 47827  
Olympia, Washington 98504

**RECEIVED**  
JUL 08 2003

**EDMC**

Dear Mr. Conklin:

**CLOSURE OF TEMPORARY DEVIATION TO AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) AG-1, ARTICLE FC-5100, HIGH-EFFICIENCY PARTICULATE AIR (HEPA) FILTER QUALIFICATION TEST REQUIREMENTS**

Pursuant to the State of Washington Department of Health (WDOH) letter AIR 01-813, dated August 31, 2001, and the Routine Technical Air meeting minutes dated May 15, 2002, this is to notify you that the U.S. Department of Energy, Office of River Protection has received independent testing certification of revised filter sealant designs for nuclear grade HEPA filters manufactured by Flanders Filters, Inc. (Flanders) in use on the Hanford Site. As such, an existing temporary deviation with the WDOH to the HEPA filter qualification test requirements specified in ASME AG-1 is no longer needed and may be closed.

The deviation was granted by WDOH in order to accommodate the time frame needed by the filter manufacturer to complete the qualification testing of the revised filter sealant designs. Additional agreement was reached in December 2002 to continue the deviation through June 2003. In the interim, the locations of HEPA filters procured from Flanders have been tracked using the Tank Farm Contractor's Non-Conformance Report process.

The filter manufacturer has announced completion of qualification testing for three filter types in order to address the new urethane pack-to-frame sealant. These filter types were chosen to represent the different materials that interface with the sealant; that is, the filter frame material and the filter mounting seal (gasket) material. The three types of filters qualified are: wood frame with neoprene gasket, wood frame with gel-seal, and stainless steel metal frame with gel-seal. All filter types chosen for qualification utilize the same filter media pack material used at Hanford.

The qualification testing has been successfully completed on sets of filters of all three types used on the Hanford Site. Attached are the documentation of qualification from Aberdeen Proving Grounds for three different model numbers of filters currently qualified and a statement of fact from Eric Deal, Quality Assurance Manager from Flanders.

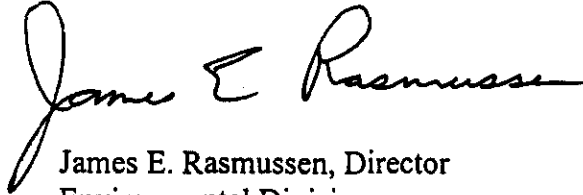
Mr. A. W. Conklin  
03-ED-106

-2-

JUL 02 2003

If you have any questions, please contact me, or your staff may contact Dennis W. Bowser,  
Environmental Division, (509) 373-2566.

Sincerely,



James E. Rasmussen, Director  
Environmental Division

ED:DWB

Attachment

cc w/attach:

B. G. Erlandson, BNI  
E. S. Aromi, CHG  
C. J. Kemp, CHG  
J. Cox, CTUIR  
B. Becker-Khaleel, Ecology  
S. L. Dahl, Ecology  
J. L. Hensley, Ecology  
O. S. Wang, Ecology  
J. A. Bates, FHI  
W. E. Green, Jr., FHI  
J. L. Hanson, INNOV  
P. Sobotta, NPT  
M. F. Jarvis, RL  
R. Jim, YN  
Administrative Record  
Environmental Portal, LMSI  
WDOH Kennewick Office

Attachment  
03-ED-106

Documentation of Qualification from  
Aberdeen Proving Grounds  
and  
A Statement of Fact

# Flanders®

FLANDERS FILTERS INC.  
531 FLANDERS FILTERS ROAD  
WASHINGTON, NC 27889

TELEPHONE: (252) 946-3310

EXT: 3310

FAX: (252) 946-3425

EMAIL: edeal@flanderscorp.com

DATE: May 14, 2003

TO: Bob Gustavson

COMPANY:

FAX NUMBER: 509/372-1608

FROM: Eric Deal

NUMBER OF PAGES: (Including This Page):

4

Bob,

As requested I am forwarding you copies of the approval letter from Aberdeen Proving Grounds for three different model numbers of filters currently qualified.

The model numbers are as follows:

0-007-C-04-00-NU-11-13-GG-FU5 Wood frame, neoprene gasket

T-007-W-04-05-NU-51-13-GG-FU5 Wood frame, fluid seal

0-007-W-43-03-NU-11-23-GG-FU5 \* Metal frame, neoprene gasket

\* Note: The model number listed in the report has a typo. The corrected data is marked to the side. A request has been made to APG for a corrected copy.

Hopefully you will find this information sufficient; however if additional information is required, please contact me.

Best regards,

Eric Deal  
Quality Assurance Manager  
Flanders Filters Inc.

REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
U.S. ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND  
E5183 BLACKHAWK ROAD  
ABERDEEN PROVING GROUND, MARYLAND 21010-5424  
Acquisition Management Business Unit

*January 2, 2002***Collective Protection Equipment Team**

Mr. Glen Moore  
Flanders/CSC Corp.  
7013 Hwy. 92 East  
Bath, NC. 27808

Dear Mr. Moore:

The Edgewood Chemical Biological Center is pleased to congratulate Flanders/CSC Corp. on the qualification of its Wood/Gasket HEPA Filter 0-007-C-04-00-NU-11-13-GG-FUS and Wood/Gel Seal HEPA Filter T-007-W-04-05-NU-51-13-GG-FUS in accordance with ASME AG-1, Section FC5110 through 5140 with the exception of the FC5160 Resistance to Spot Flame test (test not performed). A summary of the certification test results is enclosed.

This letter shall serve as proof that these HEPA filters shall satisfy all the requirements for HEPA filters stated above (ASME AG-1, Section FC5110 through 5140), provided its manufacturing process is unchanged. Should you make any changes to your process, equipment or materials, we recommend you contact the Edgewood Chemical Biological Center, AMSSB-REN-P (Mr. Do Nguyen), Building E3549, 5183 Blackhawk Road, Aberdeen Proving Ground, MD 21010-5424, telephone number 410-436-5755, or another qualified testing agency to make arrangements for re-certification testing.

Sincerely,

Vincent J. Scheno  
Acting Team Leader  
Collective Protection Equipment

Enclosure

**Copy Furnished:**

Technical Director, Edgewood CB Center, AMSSB-FEN-SN (Jerald K. Ford), E5165,  
5183 Blackhawk Road, Aberdeen Proving Ground, Maryland 21010-5424

REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
U.S. ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND  
5100 BLACKHAWK ROAD  
ABERDEEN PROVING GROUND, MARYLAND 21010-5424  
April 17, 2003

*incorrect, should be 0.  
EPA  
5/14/03*

Engineering Services Business Unit

SUBJECT: Qualification of Nuclear HEPA Filter, Flanders Model Numbers ~~X~~-007-W-43-03-  
NU-11-23-GG-FU5

Mr. Glen Moore  
Flanders/CSC Corporation  
7013 Highway 92 East  
Bath, North Carolina 27808

Dear Mr. Moore:

## References:

- a. Letter, Engineering Services Business Unit, March 20, 2003, Subject as above.
- b. Data sheet of test results dated 13 March 2003 of Flanders Filters Numbers 600253, 600254, 600268, and 600280 (Enclosure 1)
- c. Edgewood Chemical Biological Center, Engineering Directorate Quality Evaluation Laboratory Report No. 8417, dated 15 April 2003 (Enclosure 2)

The Edgewood Chemical Biological Center has retested four filters at a flow rate of 1500 CFM representing those models cited in reference a, and tested at 1250 CFM. Results of the 1500 CFM tests, are summarized in reference b, enclosure 1. The Edgewood Chemical Biological Center had requested that Flanders submit an additional four new filters for tests to confirm the flow resistance at the intended flow rate. The result of the retest proves that these filters do meet all the AG-1 requirements for filters at a flow rate of 1500 CFM. The final certification test results are provided in reference c, enclosure 2.

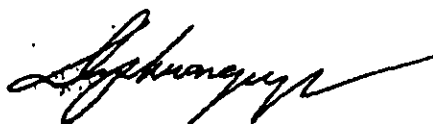
The Edgewood Chemical Biological Center is therefore pleased to congratulate Flanders/CSC Corporation on the qualification of its Stainless Steel/Gasket HEPA Filter Model Numbers ~~X~~-007-W-43-03-NU-11-23-GG-FU5 in accordance with ASME AG-1, Section FC5110 through 5140 for a flow rate of 1500 CFM with the exception of the FC5160 Resistance to Spot Flame test (test not performed).

*incorrect, should be 0.  
EPA  
5/14/03*

- 2 -

This letter shall serve as proof that this HEPA filter's configuration satisfies all the requirements for HEPA filters stated above (ASME AG-1, Section FC5110 through 5140) operating at a flow rate of 1500 CFM, provided its manufacturing process is unchanged. Should you make any changes to your process, equipment or materials, we recommend you contact the Edgewood Chemical Biological Center, Engineering Business Services Unit, AMSSB-REN-S (Mr. Do Nguyen, Filters Qualification Program Manager), Building E3549, 5183 Blackhawk Road, Aberdeen Proving Ground, MD 21010-5424, telephone number (410) 436-8088, Fax numbers (410) 436-5257, E-mail: [do.nguyen@sbccom.apgea.army.mil](mailto:do.nguyen@sbccom.apgea.army.mil) to make arrangements for re-certification testing.

Sincerely,



Do P. Nguyen  
Engineering Services Business Unit

Enclosures

Copy Furnished:

Technical Director, Edgewood CB Center, AMSSB-REN-SN (Jerald K. Ford), E5165,  
5183 Blackhawk Road, Aberdeen Proving Ground, Maryland 21010-5424